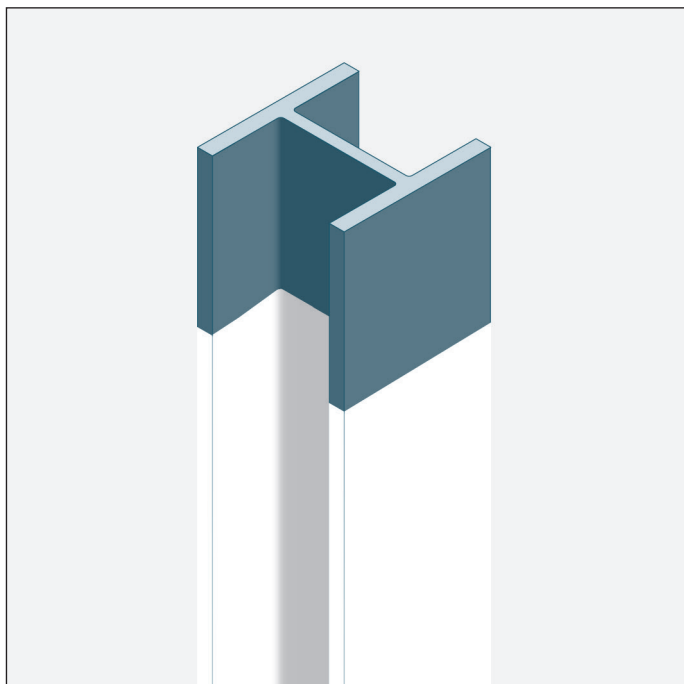


## PILASTRI E TRAVI IN ACCIAIO

**DESCRIZIONE DI CAPITOLATO**

Fornitura e posa in opera di protezione di travi o pilastri in acciaio con resistenza al fuoco R 30/60/90/120 realizzata con vernice intumescente antincendio a base solvente F62 paint ONE in conformità all'ETA 20/1216 e secondo norma EN 13381-8.

**RESISTENZA AL FUOCO: R30-120**

- **Supporto:** pilastri o travi in acciaio
- **Rivestimento protettivo:** pittura intumescente F62 paint ONE (vedi tabelle ETA 20/1216 in funzione della massività)
- **Applicazione:** a spruzzo
- **Resa:** 1,75 kg/m<sup>2</sup> per 1000 µ di spessore
- **Preparazione del fondo:** in funzione delle caratteristiche di corrosività dell'ambiente (vedi schema pag. 52-53)
- **Finitura:** in funzione delle caratteristiche di corrosività dell'ambiente (vedi schema pag. 52-53)  
Non necessaria ai fini della protezione antincendio

**Rapporto di classificazione: ETA 20/1216****Norma di prova: EN 13381-8**

La vernice sarà applicata a spruzzo in unica mano.  
Non necessita di primer anticorrosivo per applicazioni interne.  
In condizioni di esposizione C2 o superiori (ISO 12944-2) applicare gli specifici primer e protettivi (vedi schema pag. 52-53).  
Per le modalità di applicazione si veda apposita scheda tecnica.

## PILASTRI IN ACCIAIO



Per profili aperti

Spessore minimo (in micron) di F62 paint "ONE", in funzione della temperatura critica  $\theta_{a,cr}$ 

R30

| Fattore di sezione<br>(m <sup>-1</sup> ) | TEMPERATURA CRITICA $\theta_{a,cr}$ |       |       |       |
|------------------------------------------|-------------------------------------|-------|-------|-------|
|                                          | 350°C                               | 500°C | 550°C | 650°C |
| 50                                       | 1.159                               | 510   | 510   | 510   |
| 55                                       | 1.159                               | 510   | 510   | 510   |
| 60                                       | 1.159                               | 510   | 510   | 510   |
| 65                                       | 1.159                               | 510   | 510   | 510   |
| 70                                       | 1.159                               | 510   | 510   | 510   |
| 75                                       | 1.159                               | 510   | 510   | 510   |
| 80                                       | 1.159                               | 510   | 510   | 510   |
| 85                                       | 1.159                               | 510   | 510   | 510   |
| 90                                       | 1.159                               | 510   | 510   | 510   |
| 95                                       | 1.159                               | 510   | 510   | 510   |
| 100                                      | 1.201                               | 510   | 510   | 510   |
| 105                                      | 1.255                               | 510   | 510   | 510   |
| 110                                      | 1.309                               | 510   | 510   | 510   |
| 115                                      | 1.364                               | 510   | 510   | 510   |
| 120                                      | 1.418                               | 510   | 510   | 510   |
| 125                                      | 1.473                               | 510   | 510   | 510   |
| 130                                      | 1.527                               | 510   | 510   | 510   |
| 135                                      | 1.582                               | 510   | 510   | 510   |
| 140                                      | 1.636                               | 510   | 510   | 510   |
| 145                                      | 1.691                               | 510   | 510   | 510   |
| 150                                      | 1.745                               | 510   | 510   | 510   |
| 155                                      | 1.799                               | 510   | 510   | 510   |
| 160                                      | 1.854                               | 510   | 510   | 510   |
| 165                                      | 1.908                               | 510   | 510   | 510   |
| 170                                      | 1.963                               | 510   | 510   | 510   |
| 175                                      | 2.017                               | 510   | 510   | 510   |
| 180                                      | 2.063                               | 510   | 510   | 510   |
| 185                                      | 2.103                               | 510   | 510   | 510   |
| 190                                      | 2.143                               | 520   | 510   | 510   |
| 195                                      | 2.183                               | 543   | 510   | 510   |
| 200                                      | 2.223                               | 566   | 510   | 510   |
| 205                                      | 2.263                               | 590   | 510   | 510   |
| 210                                      | 2.303                               | 613   | 510   | 510   |
| 215                                      | 2.343                               | 637   | 510   | 510   |
| 220                                      | 2.383                               | 660   | 510   | 510   |
| 225                                      | 2.423                               | 683   | 510   | 510   |
| 230                                      | 2.463                               | 707   | 510   | 510   |
| 235                                      | 2.503                               | 730   | 510   | 510   |
| 240                                      | 2.544                               | 754   | 510   | 510   |
| 245                                      | 2.584                               | 777   | 510   | 510   |
| 250                                      | 2.624                               | 800   | 510   | 510   |
| 255                                      | 2.664                               | 824   | 528   | 510   |
| 260                                      | 2.704                               | 847   | 550   | 510   |
| 265                                      | 2.744                               | 871   | 572   | 510   |
| 270                                      | 2.784                               | 894   | 593   | 510   |
| 275                                      | 2.824                               | 917   | 615   | 510   |
| 280                                      | 2.864                               | 941   | 637   | 510   |
| 285                                      | 2.904                               | 964   | 659   | 510   |
| 290                                      | 2.944                               | 988   | 680   | 510   |
| 295                                      | 2.984                               | 1.011 | 702   | 510   |
| 300                                      | 3.024                               | 1.034 | 724   | 510   |
| 305                                      | 3.065                               | 1.058 | 745   | 510   |
| 310                                      | 3.105                               | 1.081 | 767   | 510   |
| 315                                      | 3.145                               | 1.105 | 789   | 510   |
| 320                                      | 3.185                               | 1.128 | 811   | 510   |
| 325                                      | 3.225                               | 1.151 | 832   | 510   |
| 330                                      | 3.265                               | 1.175 | 854   | 510   |
| 335                                      | 3.305                               | 1.198 | 876   | 510   |
| 340                                      | 3.345                               | 1.222 | 897   | 510   |
| 345                                      | 3.385                               | 1.245 | 919   | 510   |
| 350                                      | 3.425                               | 1.268 | 941   | 510   |
| 355                                      | 3.465                               | 1.292 | 963   | 510   |
| 360                                      | 3.505                               | 1.315 | 984   | 510   |

R60

| Fattore di sezione<br>(m <sup>-1</sup> ) | TEMPERATURA CRITICA $\theta_{a,cr}$ |       |       |       |
|------------------------------------------|-------------------------------------|-------|-------|-------|
|                                          | 350°C                               | 500°C | 550°C | 650°C |
| 50                                       | 1.614                               | 994   | 728   | 510   |
| 55                                       | 1.731                               | 994   | 728   | 510   |
| 60                                       | 1.849                               | 994   | 728   | 510   |
| 65                                       | 1.967                               | 994   | 728   | 510   |
| 70                                       | 2.092                               | 994   | 728   | 510   |
| 75                                       | 2.228                               | 994   | 728   | 510   |
| 80                                       | 2.365                               | 994   | 728   | 510   |
| 85                                       | 2.501                               | 1.009 | 728   | 510   |
| 90                                       | 2.638                               | 1.025 | 742   | 510   |
| 95                                       | 2.774                               | 1.042 | 770   | 510   |
| 100                                      | 2.911                               | 1.058 | 798   | 510   |
| 105                                      | 3.047                               | 1.075 | 827   | 510   |
| 110                                      | 3.184                               | 1.091 | 855   | 510   |
| 115                                      | 3.320                               | 1.108 | 884   | 516   |
| 120                                      | 3.450                               | 1.124 | 912   | 542   |
| 125                                      | 3.560                               | 1.141 | 941   | 568   |
| 130                                      | 3.670                               | 1.158 | 969   | 594   |
| 135                                      | 3.780                               | 1.174 | 997   | 620   |
| 140                                      | 3.890                               | 1.191 | 1.026 | 646   |
| 145                                      | 4.000                               | 1.207 | 1.054 | 672   |
| 150                                      | 4.110                               | 1.235 | 1.083 | 698   |
| 155                                      | 4.220                               | 1.307 | 1.111 | 724   |
| 160                                      | 4.330                               | 1.378 | 1.140 | 750   |
| 165                                      | 4.440                               | 1.449 | 1.168 | 776   |
| 170                                      | 4.549                               | 1.521 | 1.196 | 802   |
| 175                                      | 4.659                               | 1.592 | 1.229 | 828   |
| 180                                      | 4.769                               | 1.663 | 1.283 | 854   |
| 185                                      | 4.879                               | 1.735 | 1.336 | 880   |
| 190                                      | 4.989                               | 1.806 | 1.389 | 906   |
| 195                                      | —                                   | 1.877 | 1.443 | 932   |
| 200                                      | —                                   | 1.948 | 1.496 | 958   |
| 205                                      | —                                   | 2.020 | 1.550 | 984   |
| 210                                      | —                                   | 2.064 | 1.603 | 1.011 |
| 215                                      | —                                   | 2.100 | 1.657 | 1.037 |
| 220                                      | —                                   | 2.136 | 1.710 | 1.063 |
| 225                                      | —                                   | 2.172 | 1.764 | 1.089 |
| 230                                      | —                                   | 2.208 | 1.817 | 1.115 |
| 235                                      | —                                   | 2.243 | 1.871 | 1.141 |
| 240                                      | —                                   | 2.279 | 1.924 | 1.167 |
| 245                                      | —                                   | 2.315 | 1.978 | 1.193 |
| 250                                      | —                                   | 2.351 | 2.031 | 1.219 |
| 255                                      | —                                   | 2.387 | 2.060 | 1.254 |
| 260                                      | —                                   | 2.423 | 2.087 | 1.290 |
| 265                                      | —                                   | 2.459 | 2.113 | 1.326 |
| 270                                      | —                                   | 2.494 | 2.139 | 1.362 |
| 275                                      | —                                   | 2.530 | 2.166 | 1.398 |
| 280                                      | —                                   | 2.566 | 2.192 | 1.434 |
| 285                                      | —                                   | 2.602 | 2.218 | 1.470 |
| 290                                      | —                                   | 2.638 | 2.244 | 1.506 |
| 295                                      | —                                   | 2.674 | 2.271 | 1.542 |
| 300                                      | —                                   | 2.710 | 2.297 | 1.578 |
| 305                                      | —                                   | 2.745 | 2.323 | 1.614 |
| 310                                      | —                                   | 2.781 | 2.350 | 1.650 |
| 315                                      | —                                   | 2.817 | 2.376 | 1.686 |
| 320                                      | —                                   | 2.853 | 2.402 | 1.722 |
| 325                                      | —                                   | 2.889 | 2.428 | 1.758 |
| 330                                      | —                                   | 2.925 | 2.455 | 1.794 |
| 335                                      | —                                   | 2.960 | 2.481 | 1.830 |
| 340                                      | —                                   | 2.996 | 2.507 | 1.866 |
| 345                                      | —                                   | 3.032 | 2.534 | 1.902 |
| 350                                      | —                                   | 3.068 | 2.560 | 1.938 |
| 355                                      | —                                   | 3.104 | 2.586 | 1.974 |
| 360                                      | —                                   | 3.140 | 2.612 | 2.010 |

Lo spessore si riferisce al solo materiale intumescente.  
I risultati sono applicabili anche alle travi con 4 lati esposti.

## PILASTRI IN ACCIAIO



Per profili aperti

Spessore minimo (in micron) di F62 paint "ONE", in funzione della temperatura critica  $\theta_{a,cr}$ 

## R90

| Fattore di sezione<br>(m <sup>-1</sup> ) | TEMPERATURA CRITICA $\theta_{a,cr}$ |       |       |       |
|------------------------------------------|-------------------------------------|-------|-------|-------|
|                                          | 350°C                               | 500°C | 550°C | 650°C |
| 50                                       | 2.850                               | 1.304 | 1.185 | 1.067 |
| 55                                       | 3.136                               | 1.396 | 1.231 | 1.067 |
| 60                                       | 3.421                               | 1.488 | 1.278 | 1.067 |
| 65                                       | 3.557                               | 1.580 | 1.324 | 1.067 |
| 70                                       | 3.691                               | 1.672 | 1.370 | 1.069 |
| 75                                       | 3.824                               | 1.764 | 1.416 | 1.079 |
| 80                                       | 3.958                               | 1.857 | 1.462 | 1.089 |
| 85                                       | 4.092                               | 1.949 | 1.509 | 1.099 |
| 90                                       | 4.226                               | 2.041 | 1.555 | 1.109 |
| 95                                       | 4.359                               | 2.128 | 1.601 | 1.119 |
| 100                                      | 4.493                               | 2.215 | 1.647 | 1.129 |
| 105                                      | 4.627                               | 2.302 | 1.693 | 1.139 |
| 110                                      | 4.760                               | 2.390 | 1.740 | 1.149 |
| 115                                      | 4.871                               | 2.477 | 1.786 | 1.159 |
| 120                                      | 4.982                               | 2.564 | 1.832 | 1.169 |
| 125                                      | 5.093                               | 2.651 | 1.878 | 1.179 |
| 130                                      | —                                   | 2.739 | 1.924 | 1.190 |
| 135                                      | —                                   | 2.826 | 1.971 | 1.200 |
| 140                                      | —                                   | 2.913 | 2.017 | 1.210 |
| 145                                      | —                                   | 3.000 | 2.095 | 1.220 |
| 150                                      | —                                   | 3.088 | 2.197 | 1.327 |
| 155                                      | —                                   | 3.175 | 2.299 | 1.438 |
| 160                                      | —                                   | 3.262 | 2.401 | 1.550 |
| 165                                      | —                                   | 3.349 | 2.503 | 1.662 |
| 170                                      | —                                   | 3.437 | 2.605 | 1.773 |
| 175                                      | —                                   | 3.525 | 2.707 | 1.885 |
| 180                                      | —                                   | 3.613 | 2.809 | 1.997 |
| 185                                      | —                                   | 3.701 | 2.911 | 2.073 |
| 190                                      | —                                   | 3.789 | 3.013 | 2.129 |
| 195                                      | —                                   | 3.877 | 3.115 | 2.185 |
| 200                                      | —                                   | 3.965 | 3.217 | 2.241 |
| 205                                      | —                                   | 4.053 | 3.319 | 2.297 |
| 210                                      | —                                   | 4.141 | 3.421 | 2.354 |
| 215                                      | —                                   | 4.229 | 3.532 | 2.410 |
| 220                                      | —                                   | 4.317 | 3.644 | 2.466 |
| 225                                      | —                                   | 4.405 | 3.756 | 2.522 |
| 230                                      | —                                   | 4.493 | 3.867 | 2.578 |
| 235                                      | —                                   | 4.581 | 3.979 | 2.634 |
| 240                                      | —                                   | 4.669 | 4.091 | 2.690 |
| 245                                      | —                                   | 4.757 | 4.203 | 2.747 |
| 250                                      | —                                   | 4.845 | 4.314 | 2.803 |
| 255                                      | —                                   | 4.933 | 4.426 | 2.859 |
| 260                                      | —                                   | —     | 4.538 | 2.915 |
| 265                                      | —                                   | —     | 4.650 | 2.971 |
| 270                                      | —                                   | —     | 4.761 | 3.027 |
| 275                                      | —                                   | —     | 4.873 | 3.084 |
| 280                                      | —                                   | —     | 4.985 | 3.140 |
| 285                                      | —                                   | —     | —     | 3.196 |
| 290                                      | —                                   | —     | —     | 3.252 |
| 295                                      | —                                   | —     | —     | 3.308 |
| 300                                      | —                                   | —     | —     | 3.364 |
| 305                                      | —                                   | —     | —     | 3.420 |
| 310                                      | —                                   | —     | —     | 3.477 |
| 315                                      | —                                   | —     | —     | 3.533 |
| 320                                      | —                                   | —     | —     | 3.589 |
| 325                                      | —                                   | —     | —     | —     |
| 330                                      | —                                   | —     | —     | —     |
| 335                                      | —                                   | —     | —     | —     |
| 340                                      | —                                   | —     | —     | —     |
| 345                                      | —                                   | —     | —     | —     |
| 350                                      | —                                   | —     | —     | —     |
| 355                                      | —                                   | —     | —     | —     |
| 360                                      | —                                   | —     | —     | —     |

## R120

| Fattore di sezione<br>(m <sup>-1</sup> ) | TEMPERATURA CRITICA $\theta_{a,cr}$ |       |       |       |
|------------------------------------------|-------------------------------------|-------|-------|-------|
|                                          | 350°C                               | 500°C | 550°C | 650°C |
| 50                                       | —                                   | 1.733 | 1.556 | 1.250 |
| 55                                       | —                                   | 1.868 | 1.671 | 1.339 |
| 60                                       | —                                   | 2.002 | 1.785 | 1.428 |
| 65                                       | —                                   | 2.199 | 1.899 | 1.516 |
| 70                                       | —                                   | 2.418 | 2.013 | 1.605 |
| 75                                       | —                                   | 2.636 | 2.166 | 1.694 |
| 80                                       | —                                   | 2.855 | 2.329 | 1.783 |
| 85                                       | —                                   | 3.073 | 2.492 | 1.871 |
| 90                                       | —                                   | 3.292 | 2.655 | 1.960 |
| 95                                       | —                                   | 3.485 | 2.818 | 2.048 |
| 100                                      | —                                   | 3.639 | 2.981 | 2.130 |
| 105                                      | —                                   | 3.793 | 3.144 | 2.212 |
| 110                                      | —                                   | 3.948 | 3.307 | 2.294 |
| 115                                      | —                                   | 4.102 | 3.466 | 2.376 |
| 120                                      | —                                   | 4.256 | 3.612 | 2.458 |
| 125                                      | —                                   | 4.410 | 3.758 | 2.539 |
| 130                                      | —                                   | 4.564 | 3.904 | 2.621 |
| 135                                      | —                                   | 4.718 | 4.051 | 2.703 |
| 140                                      | —                                   | 4.822 | 4.197 | 2.785 |
| 145                                      | —                                   | 4.908 | 4.343 | 2.867 |
| 150                                      | —                                   | 4.995 | 4.489 | 2.949 |
| 155                                      | —                                   | 5.081 | 4.635 | 3.031 |
| 160                                      | —                                   | —     | 4.773 | 3.113 |
| 165                                      | —                                   | —     | 4.863 | 3.195 |
| 170                                      | —                                   | —     | 4.954 | 3.277 |
| 175                                      | —                                   | —     | 5.044 | 3.359 |
| 180                                      | —                                   | —     | 5.135 | 3.449 |
| 185                                      | —                                   | —     | —     | 3.573 |
| 190                                      | —                                   | —     | —     | 3.698 |
| 195                                      | —                                   | —     | —     | 3.822 |
| 200                                      | —                                   | —     | —     | 3.947 |
| 205                                      | —                                   | —     | —     | 4.072 |
| 210                                      | —                                   | —     | —     | 4.196 |
| 215                                      | —                                   | —     | —     | 4.321 |
| 220                                      | —                                   | —     | —     | 4.445 |
| 225                                      | —                                   | —     | —     | 4.570 |
| 230                                      | —                                   | —     | —     | 4.695 |
| 235                                      | —                                   | —     | —     | 4.819 |
| 240                                      | —                                   | —     | —     | 4.944 |
| 245                                      | —                                   | —     | —     | —     |
| 250                                      | —                                   | —     | —     | —     |
| 255                                      | —                                   | —     | —     | —     |
| 260                                      | —                                   | —     | —     | —     |
| 265                                      | —                                   | —     | —     | —     |
| 270                                      | —                                   | —     | —     | —     |
| 275                                      | —                                   | —     | —     | —     |
| 280                                      | —                                   | —     | —     | —     |
| 285                                      | —                                   | —     | —     | —     |
| 290                                      | —                                   | —     | —     | —     |
| 295                                      | —                                   | —     | —     | —     |
| 300                                      | —                                   | —     | —     | —     |
| 305                                      | —                                   | —     | —     | —     |
| 310                                      | —                                   | —     | —     | —     |
| 315                                      | —                                   | —     | —     | —     |
| 320                                      | —                                   | —     | —     | —     |
| 325                                      | —                                   | —     | —     | —     |
| 330                                      | —                                   | —     | —     | —     |
| 335                                      | —                                   | —     | —     | —     |
| 340                                      | —                                   | —     | —     | —     |
| 345                                      | —                                   | —     | —     | —     |
| 350                                      | —                                   | —     | —     | —     |
| 355                                      | —                                   | —     | —     | —     |
| 360                                      | —                                   | —     | —     | —     |

Lo spessore si riferisce al solo materiale intumescente.  
I risultati sono applicabili anche alle travi con 4 lati esposti.



## TRAVI IN ACCIAIO

Per profili aperti

Spessore minimo (in micron) di F62 paint "ONE", in funzione della temperatura critica  $\theta_{a,cr}$ 

## R30

| Fattore di sezione<br>(m <sup>-1</sup> ) | TEMPERATURA CRITICA $\theta_{a,cr}$ |       |       |       |
|------------------------------------------|-------------------------------------|-------|-------|-------|
|                                          | 350°C                               | 500°C | 550°C | 650°C |
| 50                                       | 1159                                | 477   | 477   | 477   |
| 55                                       | 1159                                | 477   | 477   | 477   |
| 60                                       | 1159                                | 477   | 477   | 477   |
| 65                                       | 1159                                | 477   | 477   | 477   |
| 70                                       | 1159                                | 477   | 477   | 477   |
| 75                                       | 1159                                | 477   | 477   | 477   |
| 80                                       | 1159                                | 477   | 477   | 477   |
| 85                                       | 1159                                | 477   | 477   | 477   |
| 90                                       | 1159                                | 477   | 477   | 477   |
| 95                                       | 1159                                | 477   | 477   | 477   |
| 100                                      | 1201                                | 477   | 477   | 477   |
| 105                                      | 1255                                | 477   | 477   | 477   |
| 110                                      | 1309                                | 477   | 477   | 477   |
| 115                                      | 1364                                | 477   | 477   | 477   |
| 120                                      | 1418                                | 477   | 477   | 477   |
| 125                                      | 1473                                | 477   | 477   | 477   |
| 130                                      | 1527                                | 477   | 477   | 477   |
| 135                                      | 1582                                | 477   | 477   | 477   |
| 140                                      | 1636                                | 477   | 477   | 477   |
| 145                                      | 1691                                | 477   | 477   | 477   |
| 150                                      | 1745                                | 477   | 477   | 477   |
| 155                                      | 1799                                | 477   | 477   | 477   |
| 160                                      | 1854                                | 477   | 477   | 477   |
| 165                                      | 1908                                | 477   | 477   | 477   |
| 170                                      | 1963                                | 477   | 477   | 477   |
| 175                                      | 2017                                | 477   | 477   | 477   |
| 180                                      | 2063                                | 477   | 477   | 477   |
| 185                                      | 2103                                | 496   | 477   | 477   |
| 190                                      | 2143                                | 520   | 477   | 477   |
| 195                                      | 2183                                | 543   | 477   | 477   |
| 200                                      | 2223                                | 566   | 477   | 477   |
| 205                                      | 2263                                | 590   | 477   | 477   |
| 210                                      | 2303                                | 613   | 477   | 477   |
| 215                                      | 2343                                | 637   | 477   | 477   |
| 220                                      | 2383                                | 660   | 477   | 477   |
| 225                                      | 2423                                | 683   | 477   | 477   |
| 230                                      | 2463                                | 707   | 477   | 477   |
| 235                                      | 2503                                | 730   | 477   | 477   |
| 240                                      | 2544                                | 754   | 477   | 477   |
| 245                                      | 2584                                | 777   | 485   | 477   |
| 250                                      | 2624                                | 800   | 507   | 477   |
| 255                                      | 2664                                | 824   | 528   | 477   |
| 260                                      | 2704                                | 847   | 550   | 477   |
| 265                                      | 2744                                | 871   | 572   | 477   |
| 270                                      | 2784                                | 894   | 593   | 477   |
| 275                                      | 2824                                | 917   | 615   | 477   |
| 280                                      | 2864                                | 941   | 637   | 477   |
| 285                                      | 2904                                | 964   | 659   | 477   |
| 290                                      | 2944                                | 988   | 680   | 477   |
| 295                                      | 2984                                | 1011  | 702   | 477   |
| 300                                      | 3024                                | 1034  | 724   | 477   |
| 305                                      | 3065                                | 1058  | 745   | 477   |
| 310                                      | 3105                                | 1081  | 767   | 477   |
| 315                                      | 3145                                | 1105  | 789   | 477   |
| 320                                      | 3185                                | 1128  | 811   | 477   |
| 325                                      | 3225                                | 1151  | 832   | 477   |
| 330                                      | 3265                                | 1175  | 854   | 477   |
| 335                                      | 3305                                | 1198  | 876   | 477   |
| 340                                      | 3345                                | 1222  | 897   | 477   |
| 345                                      | 3385                                | 1245  | 919   | 477   |
| 350                                      | 3425                                | 1268  | 941   | 477   |
| 355                                      | 3465                                | 1292  | 963   | 477   |
| 360                                      | 3505                                | 1315  | 984   | 477   |

## R60

| Fattore di sezione<br>(m <sup>-1</sup> ) | TEMPERATURA CRITICA $\theta_{a,cr}$ |       |       |       |
|------------------------------------------|-------------------------------------|-------|-------|-------|
|                                          | 350°C                               | 500°C | 550°C | 650°C |
| 50                                       | 1.614                               | 994   | 728   | 477   |
| 55                                       | 1.731                               | 994   | 728   | 477   |
| 60                                       | 1.849                               | 994   | 728   | 477   |
| 65                                       | 1.967                               | 994   | 728   | 477   |
| 70                                       | 2.092                               | 994   | 728   | 477   |
| 75                                       | 2.228                               | 994   | 728   | 477   |
| 80                                       | 2.365                               | 994   | 728   | 477   |
| 85                                       | 2.501                               | 1.009 | 728   | 477   |
| 90                                       | 2.638                               | 1.025 | 742   | 477   |
| 95                                       | 2.774                               | 1.042 | 770   | 477   |
| 100                                      | 2.911                               | 1.058 | 798   | 477   |
| 105                                      | 3.047                               | 1.075 | 827   | 477   |
| 110                                      | 3.184                               | 1.091 | 855   | 490   |
| 115                                      | 3.320                               | 1.108 | 884   | 516   |
| 120                                      | 3.450                               | 1.124 | 912   | 542   |
| 125                                      | 3.560                               | 1.141 | 941   | 568   |
| 130                                      | 3.670                               | 1.158 | 969   | 594   |
| 135                                      | 3.780                               | 1.174 | 997   | 620   |
| 140                                      | 3.890                               | 1.191 | 1.026 | 646   |
| 145                                      | 4.000                               | 1.207 | 1.054 | 672   |
| 150                                      | 4.110                               | 1.235 | 1.083 | 698   |
| 155                                      | 4.220                               | 1.307 | 1.111 | 724   |
| 160                                      | 4.330                               | 1.378 | 1.140 | 750   |
| 165                                      | 4.440                               | 1.449 | 1.168 | 776   |
| 170                                      | 4.549                               | 1.521 | 1.196 | 802   |
| 175                                      | 4.659                               | 1.592 | 1.229 | 828   |
| 180                                      | 4.769                               | 1.663 | 1.283 | 854   |
| 185                                      | 4.879                               | 1.735 | 1.336 | 880   |
| 190                                      | 4.989                               | 1.806 | 1.389 | 906   |
| 195                                      | —                                   | 1.877 | 1.443 | 932   |
| 200                                      | —                                   | 1.948 | 1.496 | 958   |
| 205                                      | —                                   | 2.020 | 1.550 | 984   |
| 210                                      | —                                   | 2.064 | 1.603 | 1.011 |
| 215                                      | —                                   | 2.100 | 1.657 | 1.037 |
| 220                                      | —                                   | 2.136 | 1.710 | 1.063 |
| 225                                      | —                                   | 2.172 | 1.764 | 1.089 |
| 230                                      | —                                   | 2.208 | 1.817 | 1.115 |
| 235                                      | —                                   | 2.243 | 1.871 | 1.141 |
| 240                                      | —                                   | 2.279 | 1.924 | 1.167 |
| 245                                      | —                                   | 2.315 | 1.978 | 1.193 |
| 250                                      | —                                   | 2.351 | 2.031 | 1.219 |
| 255                                      | —                                   | 2.387 | 2.060 | 1.254 |
| 260                                      | —                                   | 2.423 | 2.087 | 1.290 |
| 265                                      | —                                   | 2.459 | 2.113 | 1.326 |
| 270                                      | —                                   | 2.494 | 2.139 | 1.362 |
| 275                                      | —                                   | 2.530 | 2.166 | 1.398 |
| 280                                      | —                                   | 2.566 | 2.192 | 1.434 |
| 285                                      | —                                   | 2.602 | 2.218 | 1.470 |
| 290                                      | —                                   | 2.638 | 2.244 | 1.506 |
| 295                                      | —                                   | 2.674 | 2.271 | 1.542 |
| 300                                      | —                                   | 2.710 | 2.297 | 1.578 |
| 305                                      | —                                   | 2.745 | 2.323 | 1.614 |
| 310                                      | —                                   | 2.781 | 2.350 | 1.650 |
| 315                                      | —                                   | 2.817 | 2.376 | 1.686 |
| 320                                      | —                                   | 2.853 | 2.402 | 1.722 |
| 325                                      | —                                   | 2.889 | 2.428 | 1.758 |
| 330                                      | —                                   | 2.925 | 2.455 | 1.794 |
| 335                                      | —                                   | 2.960 | 2.481 | 1.830 |
| 340                                      | —                                   | 2.996 | 2.507 | 1.866 |
| 345                                      | —                                   | 3.032 | 2.534 | 1.902 |
| 350                                      | —                                   | 3.068 | 2.560 | 1.938 |
| 355                                      | —                                   | 3.104 | 2.586 | 1.974 |
| 360                                      | —                                   | 3.140 | 2.612 | 2.010 |

Lo spessore si riferisce al solo materiale intumescente.  
I risultati sono applicabili alle travi con solaio e 3 lati esposti.

## TRAVI IN ACCIAIO



Per profili aperti

Spessore minimo (in micron) di F62 paint "ONE", in funzione della temperatura critica  $\theta_{a,cr}$ 

## R90

| Fattore di sezione<br>(m <sup>-1</sup> ) | TEMPERATURA CRITICA $\theta_{a,cr}$ |       |       |       |
|------------------------------------------|-------------------------------------|-------|-------|-------|
|                                          | 350°C                               | 500°C | 550°C | 650°C |
| 50                                       | 2.850                               | 1.304 | 1.185 | 1.067 |
| 55                                       | 3.136                               | 1.396 | 1.231 | 1.067 |
| 60                                       | 3.421                               | 1.488 | 1.278 | 1.067 |
| 65                                       | 3.557                               | 1.580 | 1.324 | 1.067 |
| 70                                       | 3.691                               | 1.672 | 1.370 | 1.069 |
| 75                                       | 3.824                               | 1.764 | 1.416 | 1.079 |
| 80                                       | 3.958                               | 1.857 | 1.462 | 1.089 |
| 85                                       | 4.092                               | 1.949 | 1.509 | 1.099 |
| 90                                       | 4.226                               | 2.041 | 1.555 | 1.109 |
| 95                                       | 4.359                               | 2.128 | 1.601 | 1.119 |
| 100                                      | 4.493                               | 2.215 | 1.647 | 1.129 |
| 105                                      | 4.627                               | 2.302 | 1.693 | 1.139 |
| 110                                      | 4.760                               | 2.390 | 1.740 | 1.149 |
| 115                                      | 4.871                               | 2.477 | 1.786 | 1.159 |
| 120                                      | 4.982                               | 2.564 | 1.832 | 1.169 |
| 125                                      | 5.093                               | 2.651 | 1.878 | 1.179 |
| 130                                      | 5.204                               | 2.739 | 1.924 | 1.190 |
| 135                                      | 5.315                               | 2.826 | 1.971 | 1.200 |
| 140                                      | 5.426                               | 2.913 | 2.017 | 1.210 |
| 145                                      | 5.537                               | 3.000 | 2.095 | 1.220 |
| 150                                      | 5.648                               | 3.088 | 2.197 | 1.327 |
| 155                                      | 5.758                               | 3.175 | 2.299 | 1.438 |
| 160                                      | —                                   | 3.262 | 2.401 | 1.550 |
| 165                                      | —                                   | 3.349 | 2.503 | 1.662 |
| 170                                      | —                                   | 3.437 | 2.605 | 1.773 |
| 175                                      | —                                   | 3.525 | 2.707 | 1.885 |
| 180                                      | —                                   | 3.613 | 2.809 | 1.997 |
| 185                                      | —                                   | 3.701 | 2.911 | 2.073 |
| 190                                      | —                                   | 3.789 | 3.013 | 2.129 |
| 195                                      | —                                   | 3.877 | 3.115 | 2.185 |
| 200                                      | —                                   | 3.965 | 3.217 | 2.241 |
| 205                                      | —                                   | 4.053 | 3.319 | 2.297 |
| 210                                      | —                                   | 4.141 | 3.421 | 2.354 |
| 215                                      | —                                   | 4.229 | 3.532 | 2.410 |
| 220                                      | —                                   | 4.317 | 3.644 | 2.466 |
| 225                                      | —                                   | 4.405 | 3.756 | 2.522 |
| 230                                      | —                                   | 4.493 | 3.867 | 2.578 |
| 235                                      | —                                   | 4.581 | 3.979 | 2.634 |
| 240                                      | —                                   | 4.669 | 4.091 | 2.690 |
| 245                                      | —                                   | 4.757 | 4.203 | 2.747 |
| 250                                      | —                                   | 4.845 | 4.314 | 2.803 |
| 255                                      | —                                   | 4.933 | 4.426 | 2.859 |
| 260                                      | —                                   | —     | 4.538 | 2.915 |
| 265                                      | —                                   | —     | 4.650 | 2.971 |
| 270                                      | —                                   | —     | 4.761 | 3.027 |
| 275                                      | —                                   | —     | 4.873 | 3.084 |
| 280                                      | —                                   | —     | 4.985 | 3.140 |
| 285                                      | —                                   | —     | —     | 3.196 |
| 290                                      | —                                   | —     | —     | 3.252 |
| 295                                      | —                                   | —     | —     | 3.308 |
| 300                                      | —                                   | —     | —     | 3.364 |
| 305                                      | —                                   | —     | —     | 3.420 |
| 310                                      | —                                   | —     | —     | 3.477 |
| 315                                      | —                                   | —     | —     | 3.533 |
| 320                                      | —                                   | —     | —     | 3.589 |
| 325                                      | —                                   | —     | —     | —     |
| 330                                      | —                                   | —     | —     | —     |
| 335                                      | —                                   | —     | —     | —     |
| 340                                      | —                                   | —     | —     | —     |
| 345                                      | —                                   | —     | —     | —     |
| 350                                      | —                                   | —     | —     | —     |
| 355                                      | —                                   | —     | —     | —     |
| 360                                      | —                                   | —     | —     | —     |

## R120

| Fattore di sezione<br>(m <sup>-1</sup> ) | TEMPERATURA CRITICA $\theta_{a,cr}$ |       |       |       |
|------------------------------------------|-------------------------------------|-------|-------|-------|
|                                          | 350°C                               | 500°C | 550°C | 650°C |
| 50                                       | —                                   | 1.733 | 1.556 | 1.250 |
| 55                                       | —                                   | 1.868 | 1.671 | 1.339 |
| 60                                       | —                                   | 2.002 | 1.785 | 1.428 |
| 65                                       | —                                   | 2.199 | 1.899 | 1.516 |
| 70                                       | —                                   | 2.418 | 2.013 | 1.605 |
| 75                                       | —                                   | 2.636 | 2.166 | 1.694 |
| 80                                       | —                                   | 2.855 | 2.329 | 1.783 |
| 85                                       | —                                   | 3.073 | 2.492 | 1.871 |
| 90                                       | —                                   | 3.292 | 2.655 | 1.960 |
| 95                                       | —                                   | 3.485 | 2.818 | 2.048 |
| 100                                      | —                                   | 3.639 | 2.981 | 2.130 |
| 105                                      | —                                   | 3.793 | 3.144 | 2.212 |
| 110                                      | —                                   | 3.948 | 3.307 | 2.294 |
| 115                                      | —                                   | 4.102 | 3.466 | 2.376 |
| 120                                      | —                                   | 4.256 | 3.612 | 2.458 |
| 125                                      | —                                   | 4.410 | 3.758 | 2.539 |
| 130                                      | —                                   | 4.564 | 3.904 | 2.621 |
| 135                                      | —                                   | 4.718 | 4.051 | 2.703 |
| 140                                      | —                                   | 4.872 | 4.197 | 2.785 |
| 145                                      | —                                   | 4.908 | 4.343 | 2.867 |
| 150                                      | —                                   | 4.995 | 4.489 | 2.949 |
| 155                                      | —                                   | 5.081 | 4.635 | 3.031 |
| 160                                      | —                                   | 5.167 | 4.773 | 3.113 |
| 165                                      | —                                   | 5.254 | 4.863 | 3.195 |
| 170                                      | —                                   | 5.340 | 4.954 | 3.277 |
| 175                                      | —                                   | 5.426 | 5.044 | 3.359 |
| 180                                      | —                                   | 5.513 | 5.135 | 3.449 |
| 185                                      | —                                   | 5.599 | 5.226 | 3.573 |
| 190                                      | —                                   | 5.685 | 5.316 | 3.698 |
| 195                                      | —                                   | 5.772 | 5.407 | 3.822 |
| 200                                      | —                                   | —     | 5.497 | 3.947 |
| 205                                      | —                                   | —     | 5.588 | 4.072 |
| 210                                      | —                                   | —     | 5.679 | 4.196 |
| 215                                      | —                                   | —     | 5.769 | 4.321 |
| 220                                      | —                                   | —     | —     | 4.445 |
| 225                                      | —                                   | —     | —     | 4.570 |
| 230                                      | —                                   | —     | —     | 4.695 |
| 235                                      | —                                   | —     | —     | 4.819 |
| 240                                      | —                                   | —     | —     | 4.944 |
| 245                                      | —                                   | —     | —     | —     |
| 250                                      | —                                   | —     | —     | —     |
| 255                                      | —                                   | —     | —     | —     |
| 260                                      | —                                   | —     | —     | —     |
| 265                                      | —                                   | —     | —     | —     |
| 270                                      | —                                   | —     | —     | —     |
| 275                                      | —                                   | —     | —     | —     |
| 280                                      | —                                   | —     | —     | —     |
| 285                                      | —                                   | —     | —     | —     |
| 290                                      | —                                   | —     | —     | —     |
| 295                                      | —                                   | —     | —     | —     |
| 300                                      | —                                   | —     | —     | —     |
| 305                                      | —                                   | —     | —     | —     |
| 310                                      | —                                   | —     | —     | —     |
| 315                                      | —                                   | —     | —     | —     |
| 320                                      | —                                   | —     | —     | —     |
| 325                                      | —                                   | —     | —     | —     |
| 330                                      | —                                   | —     | —     | —     |
| 335                                      | —                                   | —     | —     | —     |
| 340                                      | —                                   | —     | —     | —     |
| 345                                      | —                                   | —     | —     | —     |
| 350                                      | —                                   | —     | —     | —     |
| 355                                      | —                                   | —     | —     | —     |
| 360                                      | —                                   | —     | —     | —     |

Lo spessore si riferisce al solo materiale intumescente.  
I risultati sono applicabili alle travi con solaio e 3 lati esposti.